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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/827,068	Applicant(s) CHERITON, DAVID R.
	Examiner SRINIVASA R. REDDIVALAM	Art Unit 2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-64 and 75-80* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-19,21-39,41-64 and 75-80* is/are rejected.

7)☒ Claim(s) *20 and 40* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on 07/28/2008 has been entered. Claims 65-74 have been cancelled, claims 13, 17-19, 21, 25, 33 and 53-59 have been amended and claims 75-80 have been added new. Claims 13-64 and 75-80 are still pending in the application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 53-58 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

4. Claims 53-58 have no support for the computer-readable storage medium in the specification. No where in the specification is there a mentioning of what is inclusive as being a part of a computer-readable storage medium and thus these claims raise the issue of new matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 13-19, 21, 25-26, 28-39, 41, 45-46, 48-64, and 75-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney et al. (US Patent No: 6,426,943 B1) in view of Bauman (US Patent No: 6,046,979).

Regarding claim 13, Spinney et al. teach a method comprising: extracting at least one field from a data packet (see col.18, line 58 to col.19, line 2 wherein the extraction of header data bytes is mentioned); determining a flow table index value using said at least one field (see col.19, lines 12-14 and lines 31-44 wherein determination of flow tag based on the extracted data bytes is mentioned); identifying a flow table entry using said flow table index value (see col.19, lines 34-57) wherein said flow table entry comprises a first field comprising a rate credit value (see col.20, lines 33-39 wherein transmit credits for the corresponding circuit is mentioned), and a second field comprising a buffer count value (see col.20, lines 39-49 wherein buffer length in bytes is mentioned); and processing said packet using said rate credit value and said buffer count value (see col.20, lines 49-65 wherein queue service policy for transmission of data packets is mentioned) only when said rate credit value has a non-zero value (see col.20, lines 36-37 wherein it is clearly mentioned that no transmission unless a credit exists for the circuit).

Spinney et al. do not teach specifically the method comprising determining a subsequent processing status of said data packet by comparing said rate credit value with zero and dropping said data packet without further processing when said comparison indicates that said rate credit value is zero.

However, Bauman teaches the method comprising determining a subsequent processing status of said data packet by comparing said rate credit value with zero and dropping said data packet without further processing when said comparison indicates that said rate credit value is zero (see Fig.5, blocks 178, 184, 186 & 188 and also see col.11, lines 3-22).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the method of Spinney et al. to include determining a subsequent processing status of said data packet by comparing said rate credit value with zero and dropping said data packet without further processing when said comparison indicates that said rate credit value is zero, disclosed by Bauman to provide better flow control of data packets and thereby to improve the performance of the switching system.

Regarding claim 14, Spinney et al. further teach the method wherein said rate credit value represents a transfer rate of a flow associated with said flow table entry (see col.20, lines 33-39 wherein transmit credits for the corresponding flow/circuit is mentioned), and said buffer count value represents quantity of memory space allocated to said flow associated with said flow table entry (see col.20, lines 39-55 wherein buffer length in bytes for the corresponding flow/circuit is mentioned).

Regarding claims 15 and 16, Spinney et al. further teach the method further comprising: periodically incrementing said credit value by an increment and wherein said periodically incrementing comprises: periodically incrementing said credit value by an increment up to a predetermined maximum value (see col.24, lines 30-40 wherein the proper establishment of credit by MOM to QM about every 10 milliseconds is mentioned).

Regarding claim 17, Spinney et al. further teach the method wherein said at least one field comprises a set of fields, and said determining said flow table index value comprises determining said flow table index value using a subset of said set of fields (see col.19, lines 12-44).

Regarding claim 18, Spinney et al. further teach the method wherein said flow table index value belongs to a first set of values, and a maximum number of values in said first set of values is less than a maximum number of possible flows (see col.20, lines 29-32 wherein maximum no. of transmit queues for the circuits is mentioned).

Regarding claim 19, Spinney et al. further teach the method wherein said at least one field from a data packet comprises a source address field and a destination

address field (see Fig.7A and col.9, lines 26-41 wherein source address field and a destination address field are mentioned in data header).

Regarding claim 21, Spinney et al. further teach the method wherein said at least one field comprises a plurality of fields, and said determining said flow table index value comprises at least one of: hashing data of said plurality of fields, and concatenating data of said plurality of fields (see col.18, line 58 to col.19, line 14 wherein use of hash function is mentioned in determining flow table index value of extracted header data bytes).

Regarding claim 25, Spinney et al. further teach the method wherein said processing comprises at least one of: enqueuing said data packet; modifying said data packet; and dropping said data packet (see col. 27, line 66 to col.28, line 13).

Regarding claim 26, Spinney et al. further teach the method wherein said processing further comprises: comparing a size value associated with said data packet to said rate credit value (see col.23, lines 17-32); and comparing said buffer count value to a buffer limit value (see col.29, lines 1-14).

Regarding claim 28, Spinney et al. further teach the method wherein said processing further comprises: dropping said data packet in response to a determination that said size value associated with said data packet is greater than said rate credit value (see col.20, lines 33-39 wherein no transmission of packets unless a credit exists for the circuit is mentioned).

Regarding claim 29, Spinney et al. further teach the method further comprising: decrementing said rate credit value by said size value associated with said data packet

in response to a determination that said size value associated with said data packet is less than or equal to said rate credit value (see Fig.31 and col.23, lines 25-28 wherein QM decrementing the credit count is mentioned).

Regarding claim 30, Spinney et al. further teach the method wherein said processing further comprises: comparing a size value associated with said data packet to said rate credit value (see col.20, lines 33-39), determining a buffer limit value in response to said comparing said size value associated with said data packet to said rate credit value (see col.27, lines 33-45) and comparing said buffer count value to said buffer limit value in response to said determining said buffer limit value (see col.28, line 63 to col.29, line11).

Regarding claims 31 and 32, Spinney et al. further teach the method wherein said determining said buffer limit value comprises: determining a buffer limit value in response to a determination that said size value associated with said data packet is less than or equal to said rate credit value and wherein said determining said buffer limit value further comprises: determining a reduced buffer limit in response to a determination that said size value associated with said data packet is greater than said rate credit value (see col.27, lines 40-56).

Regarding claim 33, Spinney et al. teach an apparatus (see Fig.4, 40 for Relay Engine) comprising: means for extracting at least one field from a data packet (see col.18, line 58 to col.19, line 2 wherein the extraction of header data bytes using Hash function is mentioned); means for determining a flow table index value using said at least one field (see col.19, lines 12-14 and lines 31-44 wherein determination of flow tag

based on the extracted data bytes by the Hash Preprocessor is mentioned); means for identifying a flow table entry using said flow table index value (see col.19, lines 34-57 wherein identification of flow tag and its corresponding flow circuit are mentioned) wherein said flow table entry comprises a first field comprising a rate credit value (see col.20, lines 33-39 wherein transmit credits for the corresponding circuit is mentioned), and a second field comprising a buffer count value (see col.20, lines 39-49 wherein buffer length in bytes is mentioned); and means for processing said packet using said rate credit value and said buffer count value (see col.20, lines 49-65 wherein queue service policy for transmission of data packets is mentioned) only when said rate credit value has a non-zero value (see col.20, lines 36-37 wherein it is clearly mentioned that no transmission unless a credit exists for the circuit).

Spinney et al. do not teach specifically the apparatus comprising means for determining a subsequent processing status of said data packet comprising means for comparing said rate credit value with zero and means for dropping said data packet without further processing when said means for comparison indicates that said rate credit value is zero.

However, Bauman teaches the apparatus comprising means for determining a subsequent processing status of said data packet comprising means for comparing said rate credit value with zero and means for dropping said data packet without further

processing when said means for comparison indicates that said rate credit value is zero (see Abstract, Fig.5, blocks 178, 184, 186 & 188 and also see col.11, lines 3-22).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the apparatus of Spinney et al. to include means for determining a subsequent processing status of said data packet comprising means for comparing said rate credit value with zero and means for dropping said data packet without further processing when said means for comparison indicates that said rate credit value is zero, disclosed by Bauman to provide better flow control of data packets and thereby to improve the performance of the switching system.

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Regarding claim 34, Spinney et al. further teach the apparatus wherein said rate credit value represents a transfer rate of a flow associated with said flow table entry (see col.20, lines 33-39 wherein transmit credits for the corresponding flow/circuit is mentioned), and said buffer count value represents quantity of memory space allocated to said flow associated with said flow table entry (see col.20, lines 39-55 wherein buffer length in bytes for the corresponding flow/circuit is mentioned).

Regarding claims 35 and 36, Spinney et al. further teach the apparatus further comprising: means for periodically incrementing said credit value by an increment and wherein said means for periodically incrementing comprises: means for periodically incrementing said credit value by an increment up to a predetermined maximum value

(see col.24, lines 30-40 wherein the proper establishment of credit by MOM to QM about every 10 milliseconds is mentioned).

Regarding claim 37, Spinney et al. further teach the apparatus wherein said at least one field comprises a set of fields, and said means for determining said flow table index value comprises means for determining said flow table index value using a subset of said set of fields (see col.19, lines 12-44).

Regarding claim 38, Spinney et al. further teach the apparatus wherein said flow table index value belongs to a first set of values, and a maximum number of values in said first set of values is less than a maximum number of possible flows (see col.20, lines 29-32 wherein maximum no. of transmit queues for the circuits is mentioned).

Regarding claim 39, Spinney et al. further teach the apparatus wherein said at least one field from a data packet comprises a source address field and a destination address field (see Fig.7A and col.9, lines 26-41 wherein source address field and a destination address field are mentioned in data header).

Regarding claim 41, Spinney et al. further teach the apparatus wherein said at least one field comprises a plurality of fields, and said means for determining said flow table index value comprises at least one of: means for hashing data of said plurality of fields, and means for concatenating data of said plurality of fields (see col.18, line 58 to col.19, line 14 wherein use of hash function is mentioned in determining flow table index value of extracted header data bytes).

Regarding claim 45, Spinney et al. further teach the apparatus wherein said processing comprises at least one of: means for enqueuing said data packet; means for

modifying said data packet; and means for dropping said data packet (see col. 27, line 66 to col.28, line 13).

Regarding claim 46, Spinney et al. further teach the apparatus wherein said processing further comprises: means for comparing a size value associated with said data packet to said rate credit value (see col.23, lines 17-32); and means for comparing said buffer count value to a buffer limit value (see col.29, lines 1-14).

Regarding claim 48, Spinney et al. further teach the apparatus wherein said processing further comprises: means for dropping said data packet in response to a determination that said size value associated with said data packet is greater than said rate credit value (see col.20, lines 33-39 wherein no transmission of packets unless a credit exists for the circuit is mentioned).

Regarding claim 49, Spinney et al. further teach the apparatus further comprising: means for decrementing said rate credit value by said size value associated with said data packet in response to a determination that said size value associated with said data packet is less than or equal to said rate credit value (see Fig.31 and col.23, lines 25-28 wherein QM decrementing the credit count is mentioned).

Regarding claim 50, Spinney et al. further teach the apparatus wherein said means for processing further comprises: means for comparing a size value associated with said data packet to said rate credit value (see col.20, lines 33-39), means for determining a buffer limit value (see col.27, lines 33-45) and means for comparing said buffer count value to said buffer limit value (see col.28, line 63 to col.29, line11).

Regarding claims 51 and 52, Spinney et al. further teach the apparatus wherein said means for determining said buffer limit value comprises: means for determining a buffer limit value in response to a determination that said size value associated with said data packet is less than or equal to said rate credit value and wherein said means for determining said buffer limit value further comprises: means for determining a reduced buffer limit in response to a determination that said size value associated with said data packet is greater than said rate credit value (see col.27, lines 40-56).

Regarding claim 53, Spinney et al. teach a computer-readable storage medium having embodied therein a plurality of instructions executable by a computer (see Fig.4, 40 and col.5, lines 35-48), wherein said plurality of instructions when executed cause said computer to perform a method comprising: extracting at least one field from a data packet (see col.18, line 58 to col.19, line 2 wherein the extraction of header data bytes is mentioned); determining a flow table index value using said at least one field (see col.19, lines 12-14 and lines 31-44 wherein determination of flow tag based on the extracted data bytes is mentioned); identifying a flow table entry using said flow table index value (see col.19, lines 34-57) wherein said flow table entry comprises a first field comprising a rate credit value (see col.20, lines 33-39 wherein transmit credits for the corresponding circuit is mentioned), and a second field comprising a buffer count value (see col.20, lines 39-49 wherein buffer length in bytes is mentioned); and processing said packet using said rate credit value and said buffer count value (see col.20, lines 49-65 wherein queue service policy for transmission of data packets is mentioned) only

when said rate credit value has a non-zero value (see col.20, lines 36-37 wherein it is clearly mentioned that no transmission unless a credit exists for the circuit).

Spinney et al. do not teach specifically the above computer-readable storage medium cause said computer to perform the method comprising determining a subsequent processing status of said data packet by comparing said rate credit value with zero and dropping said data packet without further processing when said comparison indicates that said rate credit value is zero.

However, Bauman teaches the method comprising determining a subsequent processing status of said data packet by comparing said rate credit value with zero and dropping said data packet without further processing when said comparison indicates that said rate credit value is zero (see Fig.5, blocks 178, 184, 186 & 188 and also see col.11, lines 3-22).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the computer-readable storage medium that cause said computer to perform the method of Spinney et al. to include determining a subsequent processing status of said data packet by comparing said rate credit value with zero and dropping said data packet without further processing when said comparison indicates that said rate credit value is zero, disclosed by Bauman to provide better flow control of data packets and thereby to improve the performance of the switching system.

Regarding claim 54, Spinney et al. further teach the computer-readable storage medium wherein said rate credit value represents a transfer rate of a flow associated with said flow table entry (see col.20, lines 33-39 wherein transmit credits for the corresponding flow/circuit is mentioned), and said buffer count value represents quantity of memory space allocated to said flow associated with said flow table entry (see col.20, lines 39-55 wherein buffer length in bytes for the corresponding flow/circuit is mentioned).

Regarding claim 55, Spinney et al. further teach the computer-readable storage medium wherein said flow table index value belongs to a first set of values, and a maximum number of values in said first set of values is less than a maximum number of possible flows (see col.20, lines 29-32 wherein maximum no. of transmit queues for the circuits is mentioned).

Regarding claim 56, Spinney et al. further teach the computer-readable storage medium wherein said processing further comprises: comparing a size value associated with said data packet to said rate credit value (see col.20, lines 33-39); determining a buffer limit value in response to said comparing said size value associated with said data packet to said rate credit value (see col.27, lines 33-45); and comparing said buffer count value to said buffer limit value in response to said determining said buffer limit value (see col.28, line 63 to col.29, line11).

Regarding claims 57 and 58, Spinney et al. further teach the computer-readable storage medium wherein said determining said buffer limit value comprises:

determining a buffer limit value in response to a determination that said size value associated with said data packet is less than or equal to said rate credit value and wherein said determining said buffer limit value further comprises: determining a reduced buffer limit in response to a determination that said size value associated with said data packet is greater than said rate credit value (see col.27, lines 40-56).

Regarding claim 59, Spinney et al. teach a data processing system (see Fig.4) comprising: a buffer manager (see Fig.4, 30 for Queue Manager) configured to receive a data packet (see col.18, lines 58-62 wherein the receipt of packet is mentioned); and a controller (see Fig.4, 40) coupled to said buffer manager and configured to, extract at least one field from a data packet (see col.18, line 58 to col.19, line 2 wherein the extraction of header data bytes is mentioned); determine a flow table index value using said at least one field (see col.19, lines 12-14 and lines 31-44 wherein determination of flow tag based on the extracted data bytes is mentioned); identify a flow table entry using said flow table index value (see col.19, lines 34-57) wherein said flow table entry comprises a first field comprising a rate credit value (see col.20, lines 33-39 wherein transmit credits for the corresponding circuit is mentioned), and a second field comprising a buffer count value (see col.20, lines 39-49 wherein buffer length in bytes is mentioned); and process said packet using said rate credit value and said buffer count value (see col.20, lines 49-65 wherein queue service policy for transmission of data packets is mentioned) only when said rate credit value has a non-zero value (see col.20, lines 36-37 wherein it is clearly mentioned that no transmission unless a credit exists for the circuit).

Spinney et al. do not teach specifically the system comprising a controller configured to determine a subsequent processing status of said data packet by being configured to compare said rate credit value with zero and drop said data packet without further processing when said comparison indicates that said rate credit value is zero.

However, Bauman teaches the system comprising a controller configured to determine a subsequent processing status of said data packet by being configured to compare said rate credit value with zero and drop said data packet without further processing when said comparison indicates that said rate credit value is zero (see Abstract, Fig.5, blocks 178, 184, 186 & 188 and also see col.11, lines 3-22).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the controller of the system of Spinney et al. to include configuring to determine a subsequent processing status of said data packet by being configured to compare said rate credit value with zero and drop said data packet without further processing when said comparison indicates that said rate credit value is zero, disclosed by Bauman to provide better flow control of data packets and thereby to improve the performance of the switching system.

Regarding claim 60, Spinney et al. further teach the data processing system wherein said rate credit value represents a transfer rate of a flow associated with said

flow table entry (see col.20, lines 33-39 wherein transmit credits for the corresponding flow/circuit is mentioned), and said buffer count value represents quantity of memory space allocated to said flow associated with said flow table entry (see col.20, lines 39-55 wherein buffer length in bytes for the corresponding flow/circuit is mentioned).

Regarding claim 61, Spinney et al. further teach the data processing system wherein said flow table index value belongs to a first set of values, and a maximum number of values in said first set of values is less than a maximum number of possible flows (see col.20, lines 29-32 wherein maximum no. of transmit queues for the circuits is mentioned).

Regarding claim 62, Spinney et al. further teach the data processing system wherein said controller is further configured to, compare a size value associated with said data packet to said rate credit value (see col.20, lines 33-39); determine a buffer limit value (see col.27, lines 33-45); and compare said buffer count value to said buffer limit value (see col.28, line 63 to col.29, line11).

Regarding claims 63 and 64, Spinney et al. further teach the data processing system wherein said controller is further configured to determine a buffer limit value in response to a determination that said size value associated with said data packet is less than or equal to said rate credit value and wherein said controller is further configured to determine a reduced buffer limit in response to a determination that said size value associated with said data packet is greater than said rate credit value (see col.27, lines 40-56).

Regarding claim 75, Spinney et al. and Bauman together teach the method of claim 13. Spinney et al. further teach the method of claim 13, wherein said determining comprises: using said at least one field as an input to a hash function and determining said flow table index value as an output of said hash function (see Fig.4 and col.19, lines 12-44 wherein processing of selected bytes from the header data by the Hash Preprocessor and determining an actual index to the hash table which identify the flow tag is mentioned).

Regarding claim 76, Spinney et al. further teach the method further comprising: periodically changing a seed value of said hash function (see col.19, lines 12-25 wherein multiplying input header bits **by a random 32-bit polynomial** and further processing during hash function processing to obtain an actual index to the hash table is mentioned and also see col.20, lines 9-12 wherein periodically **changing the respective multipliers to result in a better randomization** for the given set of addresses in the network to avoid hash collisions is mentioned which is equivalent to periodically changing a seed value of said hash function).

Regarding claim 77, Spinney et al. further teach the apparatus wherein said means for determining comprises: means for hashing said at least one data field using a hash function to obtain said flow table index value (see Fig.4 and col.19, lines 12-44 wherein processing of selected bytes from the header data by the Hash Preprocessor and determining an actual index to the hash table which identify the flow tag is mentioned).

Regarding claim 78, Spinney et al. further teach the apparatus further comprising: means for periodically changing a seed value of said hash function (see col.19, lines 12-25 wherein multiplying input header bits **by a random 32-bit polynomial** and further processing during hash function processing to obtain an actual index to the hash table is mentioned and also see col.20, lines 9-12 wherein periodically **changing the respective multipliers to result in a better randomization** for the given set of addresses in the network to avoid hash collisions is mentioned which is equivalent to periodically changing a seed value of said hash function).

Regarding claim 79, Spinney et al. further teach the data processing system, wherein said controller is configured to determine said flow table index value by hashing said at least one field using a hash function (see Fig.4 and col.19, lines 12-44 wherein processing of selected bytes from the header data by the Hash Preprocessor and determining an actual index to the hash table which identify the flow tag is mentioned).

Regarding claim 80, Spinney et al. further teach the data processing system, wherein said controller is further configured to periodically change a seed value of said hash function (see col.19, lines 12-25 wherein multiplying input header bits **by a random 32-bit polynomial** and further processing during hash function processing to obtain an actual index to the hash table is mentioned and also see col.20, lines 9-12 wherein periodically **changing the respective multipliers to result in a better randomization** for the given set of addresses in the network to avoid hash collisions is mentioned which is equivalent to periodically changing a seed value of said hash function).

7. Claims 22-24, and 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney et al. (US Patent No: 6,426,943 B1) in view of Bauman (US Patent No: 6,046,979) and further in view of Bergman et al. (US Patent No: 5,303,237).

Regarding claim 22, Spinney et al. and Bauman together teach the method of claim 13 and do not yet together teach specifically the method further comprising: performing said determining, said identifying, and said processing in response to a determination that data packet comprises a Voice packet.

However, Bergman et al. teach the method where data packet/frame comprises a Voice packet in a digital communication network (see col.4, lines 29-32 where a frame containing voice or data is mentioned and also see col.1, lines 41-45).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the method of Spinney et al. and Bauman to include voice in a data packet disclosed by Bergman et al. to support Voice over IP communication in the network.

Regarding claims 23 and 24, Bergman et al. further teach the method where a data flow table can contain a voice flow table/ voice portion of a flow table (see col.1, lines 41-45 wherein encoding and transmission of voice in digital communication network is mentioned and also see col.4, lines 29-32 where a frame containing voice or data is mentioned).

Regarding claim 42, Spinney et al. Bauman together teach the apparatus of claim 33 and do not yet together teach specifically the apparatus further comprising: means for performing said determining, said identifying, and said processing in response to a determination that data packet comprises a voice packet.

However, Bergman et al. teach the apparatus where data packet/frame comprises a Voice packet in a digital communication network (see col.4, lines 29-32 where a frame containing voice or data is mentioned and also see col.1, lines 41-45).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the apparatus of Spinney et al. and Bauman to include voice in a data packet disclosed by Bergman et al. to support Voice over IP communication in the network.

Regarding claims 43 and 44, Bergman et al. further teach the apparatus where a data flow table can contain a voice flow table/ voice portion of a flow table (see col.1, lines 41-45 wherein encoding and transmission of voice in digital communication network is mentioned and also see col.4, lines 29-32 where a frame containing voice or data is mentioned).

8. Claims 27 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney et al. (US Patent No: 6,426,943 B1) in view of Bauman (US Patent No: 6,046,979) and further in view of Choudhury et al. (US Patent No: 5,541,912).

Regarding claim 27, Spinney et al. and Bauman together do not teach specifically the method wherein said processing further comprises: dropping said data packet in response to a determination that said buffer count value is greater than said buffer limit value.

However, Choudhury et al. teach the method further comprising dropping said data packet in response to a determination that said buffer count value is greater than said buffer limit value (see col.8, lines 41-48 wherein dropping of packet is mentioned when the queue length i.e. buffer count value exceeds the control threshold value i.e. buffer limit value).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the method of Spinney et al. and Bauman to include dropping data packet in response to a determination that said buffer count value is greater than said buffer limit value, disclosed by Choudhury et al. to avoid congestion in the network.

Regarding claim 47, Spinney et al. and Bauman do not teach specifically the apparatus wherein said means for processing further comprises: means for dropping said data packet in response to a determination that said buffer count value is greater than said buffer limit value.

However, Choudhury et al. teach the apparatus further comprising means for dropping said data packet in response to a determination that said buffer count value is greater than said buffer limit value (see col.8, lines 41-48 wherein dropping of packet is mentioned when the queue length i.e. buffer count value exceeds the control threshold value i.e. buffer limit value).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the apparatus of Spinney et al. and Bauman to include means for dropping data packet in response to a determination that said buffer count value is greater than said buffer limit value, disclosed by Choudhury et al. to avoid congestion in the network.

Allowable Subject Matter

9. Claims 20 and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to claims 13-19, 21-39, 41-64 and 75-80 have been considered but are moot in view of the new ground(s) of rejection.

11. In page 20 of Applicant’s Remarks, Applicants mention that they fail to find any teaching in Spinney discussing identifying a flow table entry using a flow table index value determined from at least one field of a data packet, wherein the flow table entry contains a rate credit value as recited in independent claim 13 and the Hash Tables

discussed in column 19 in Spinney do not contain any such rate credit value. Applicants further mention that In Spinney, entries in the Hash Tables are accessed using hashing of the packet header data, but no such hashing is discussed in Spinney for accessing the contents of the Transmit Context Table. **However, these statements from Applicants are not valid as Spinney et al. teach the method of claim 13 comprising: extracting at least one field from a data packet (see col.18, line 58 to col.19, line 2 wherein the extraction of header data bytes is mentioned); determining a flow table index value using said at least one field (see col.19, lines 12- 44 wherein determination of flow tag based on the extracted data bytes is mentioned); identifying a flow table entry using said flow table index value (see col.19, lines 34-57) wherein said flow table entry comprises a first field comprising a rate credit value (see col.20, lines 33-39 wherein transmit credits for the corresponding circuit is mentioned). Spinney et al. teach flow tags as mentioned above and clearly mention that the tag is a pointer to information about the circuit or circuits to which the packet will be forwarded (see col.19, lines 42-43) and also mention that the core of the transmission phase is the Transmit Context Table which is organized by circuit, four four-byte words for each circuit as shown in fig. 35 and word 0 contains credit sync bit, seven bits 812 for transmit credits etc. (see col.20, lines 33-39).**

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any response to this office action should be faxed to (571) 273-8300 or mailed To:

Commissioner for Patents,
P.O. Box 1450
Alexandria, VA 22313-1450
Hand-delivered responses should be brought to
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SRINIVASA R. REDDIVALAM whose telephone number is (571)270-3524. The examiner can normally be reached on Mon-Fri 9:30 AM - 7 PM (1st Friday OFF).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on 571-272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Srini Reddivalam

11/22/2008

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2419